

# Multiple Non-Source Contamination

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IC Roundtable  
April 4-6, 2006

# General Rule

- Generally, ICs are considered when a site's selected remedial option (e.g., cap, natural attenuation or long-term pumping and treatment) leaves waste in place that will not result in unrestricted use and unlimited exposure.
- Selection of ICs are made on a site-by-site basis after weighing the costs and benefits of each IC type.



# General Rule (Cont.)

- Four types of ICs:
  - Proprietary Controls (e.g., covenants);
  - Government Controls (e.g., ordinances, statutes or building permits);
  - Enforcement and Permit Tools w/ IC component (e.g., UAOs or AOCs).
  - Informational Devices (e.g., deed notices)
- U.S. EPA will conduct an analysis to determine if ICs should be layered (i.e., multiple ICs should be used).



# General Rule (Cont.)

- Often, proprietary controls (e.g., restrictive covenants) are more advantageous than other ICs because they “run with the land,” thereby providing long-term protectiveness.



# Concern

- However, CERCLA sites (e.g., landfills) often produce hazardous substance plumes (e.g., ground water plumes) that contaminate multiple properties surrounding the source site.
- Sometimes less practical to require every land owner to record proprietary controls.
- Fifth Amendment Takings concerns may make proprietary controls more costly and inefficient.



# Governmental Controls (e.g., zoning and ordinances)

- Restrict land across a broad geographic area.
- Promote enforcement that is more balanced amongst Federal, State, Local authorities.
- Promotes efficient communication between government authorities.
- While “takings” analysis should still be conducted, many municipality authorities (e.g., zoning laws) are well established.



# Questions to Ask

- What is the extent (vertical and horizontal) of the off-property contamination?
- Upon what information does EPA rely to depict the area of contamination?
- How variable and likely to change is the information about the extent of the contamination?



# Questions to Ask

- Are there any pre-existing uses that are incompatible w/ restrictions needed for protectiveness of the off-property areas?
- Is there a comprehensive plan for land use and zoning that covers the area surrounding the site?





# Questions to Ask

- Are exposure pathways (e.g., vapor intrusion, drinking water) for off-property contamination fully understood?
- Do existing governmental controls go “far enough” to address the Superfund Restrictions?
- Are other governmental agencies aware of the Superfund issues?



# Questions to Ask

- How do existing governmental entities enforce the restrictions?
- Do issues such as lack of resources impact enforcement of restrictions?
- Do we need to enter into a memorandum of agreement or draft a communication plan between governmental agencies?



# IC Options

- Ordinances / Regulations can be used for the purpose of notifying the public about contaminated properties and the restricted uses. It is best when these are specific and well-written.



# IC Options

- For sites w/ a fluctuating plume or uncertainty in the extent of contamination, it is best to include areas of uncertainty and dates on maps and to consider these factors when selecting ICs
- Sampling & characterization, including plume stability and subsequent mapping of information is an important tool in implementing effective and appropriate ICs

ICs

# Other Considerations

- As owners of land that has off-property contamination are unlikely to be PRPs, EPA (or the lead Federal Agency at Federal Facilities) should consider conducting a “takings” analysis.
- Notice of responsibilities regarding use restrictions should be given to off-property owners before any enforcement action is initiated.

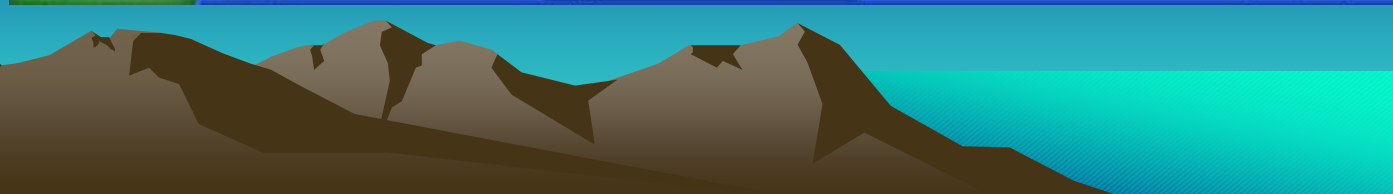
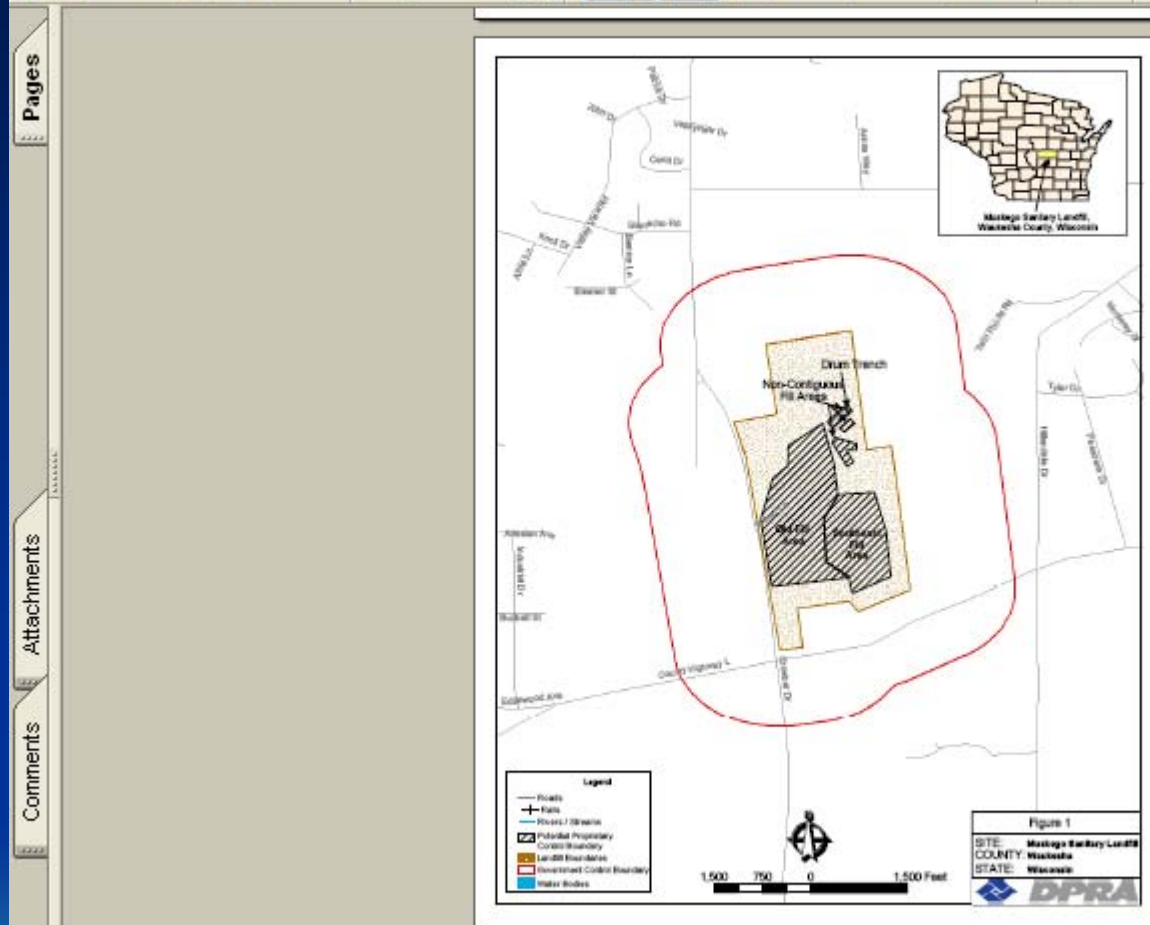


# Mapping of Non-Source Areas

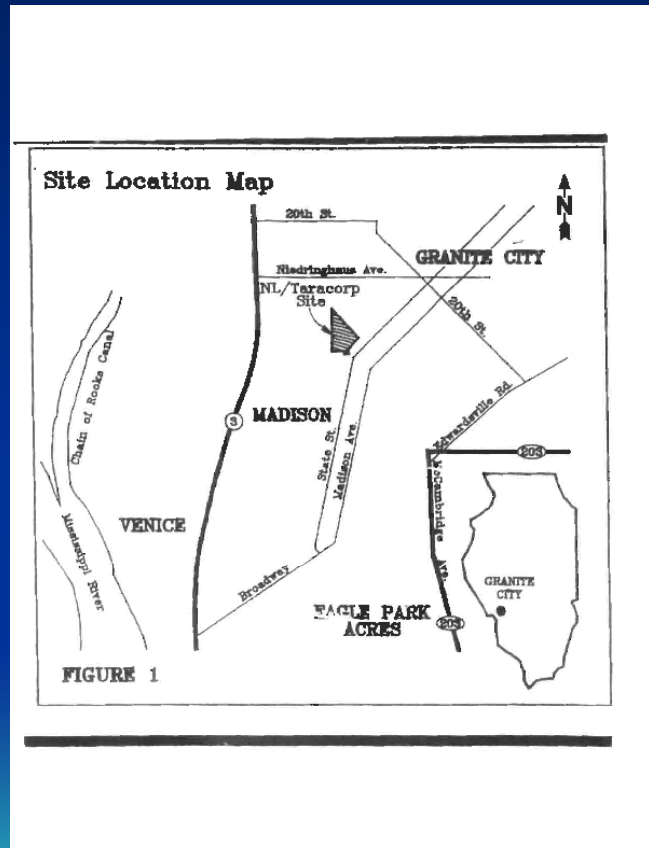
- **EXAMPLES-**

\*\*\*Drafts- not to be relied upon\*\*\*



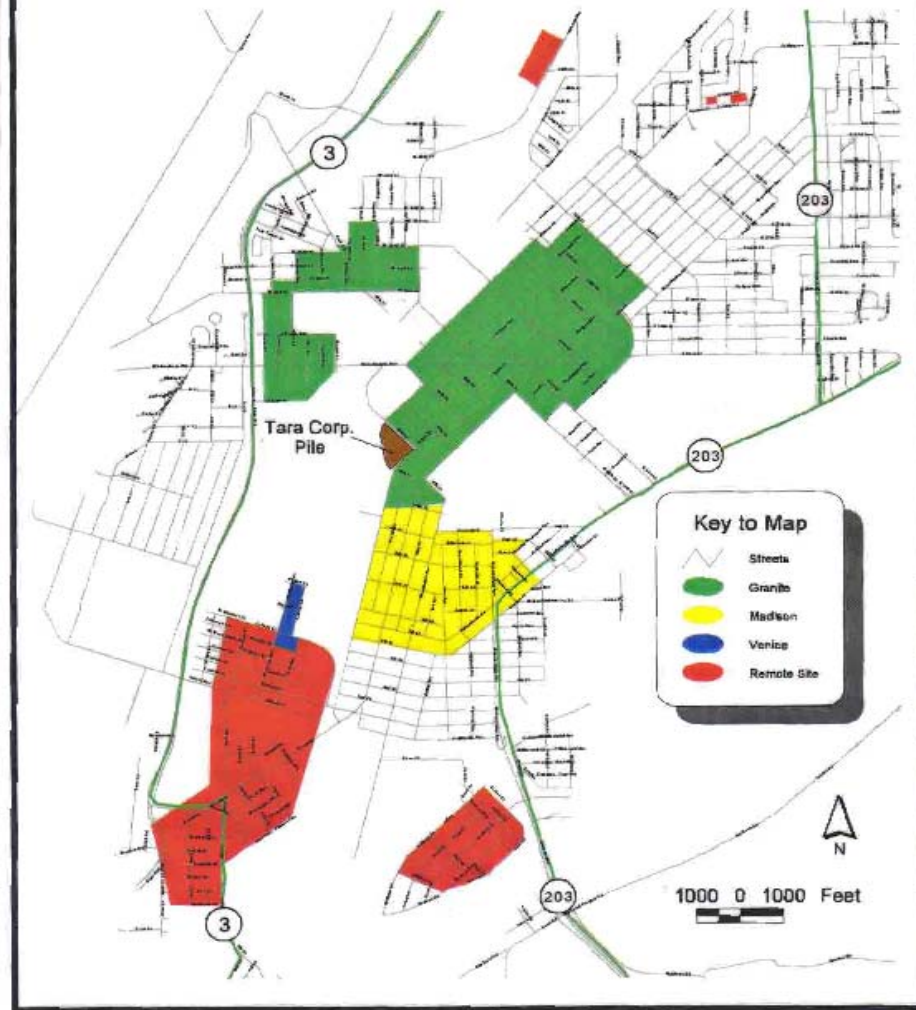


# MAPPING IS CRITICAL TO UNDERSTAND LARGE AREAS OF CONTAMINATION





# N.L. Tara Corp Super Fund Site Clean Up Zones



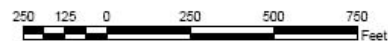
# IC Plan/ Strategy

- Define Areas Requiring ICs/ Objectives
- Develop Possibilities/Weigh Options
- Use Existing Governmental Controls/  
Explore new Gov. Controls
- Enforcement to Require Restrictive  
Covenants
- Informational Tools/ Notices To Real  
Estate Community/ Residents/ County  
Recorders Office





Legend	
Parcels Intersecting Site Boundary	Groundwater Area
Deed Restrictions	Sol-Waste Area
Site Boundary -- Fence	Landfill Cap



EPA Disclaimer: Please be advised that the areas depicted in the map have been estimated. The map does not create any rights enforceable by any party. EPA may refine or change this data and map at any time.

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File Name LakeSandyJo.Plot.pdf	Revision Date 03/16/2006
Date 03/08/2006	
Drawn By Trisha Van Stright	
Reviewed By Jon Gibson	

Figure Title

**Figure 2**  
**Lake Sandy Jo (M & M Landfill), IN**  
**Areas Depicting Required Institutional Controls**  
**And Parcel Coverage for Site Area Only**

**DRAFT**



**Legend**

Parcels With Deed Restrictions	Groundwater Area
Deed Restrictions	Soil/Waste Area
Site Boundary -- Fence	Landfill Cap



250 125 0 250 500 750 Feet

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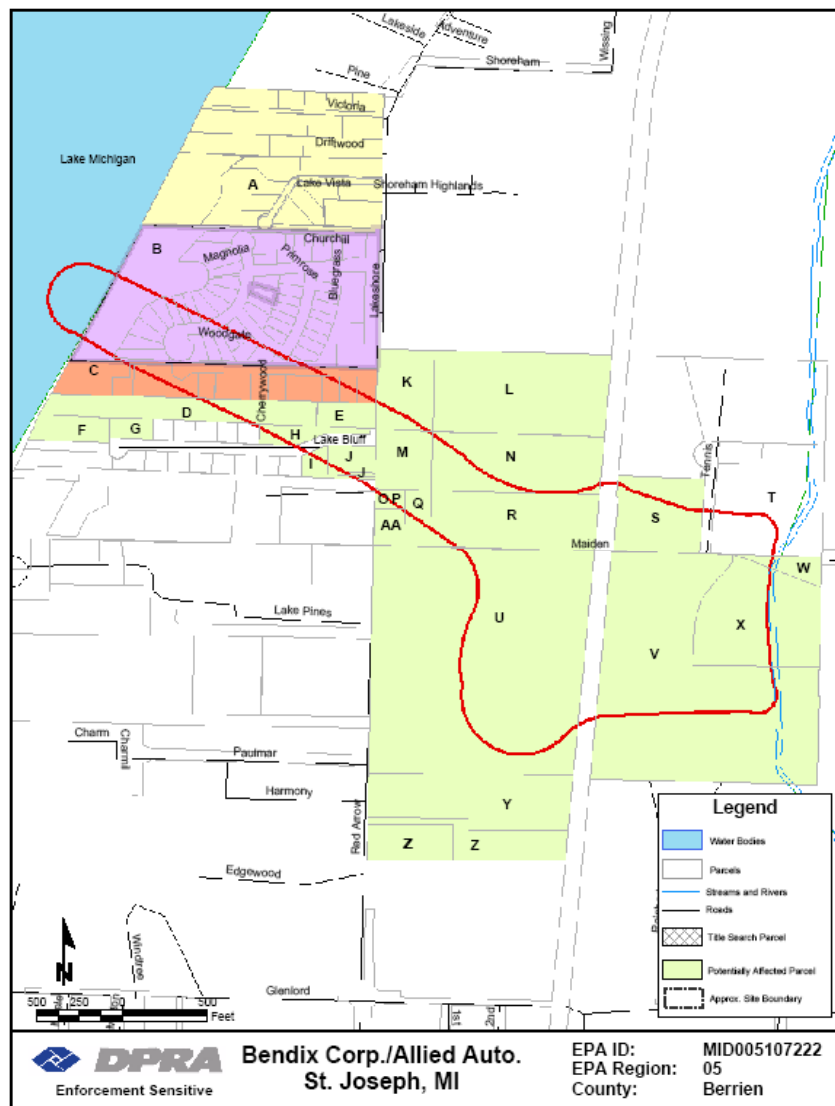
Figure Title  
**Figure 1**  
 Lake Sandy Jo (M & M Landfill), IN  
 Areas Depicting Required Institutional Controls  
 And Parcel Coverage for Deed Restriction Area

**DRAFT**

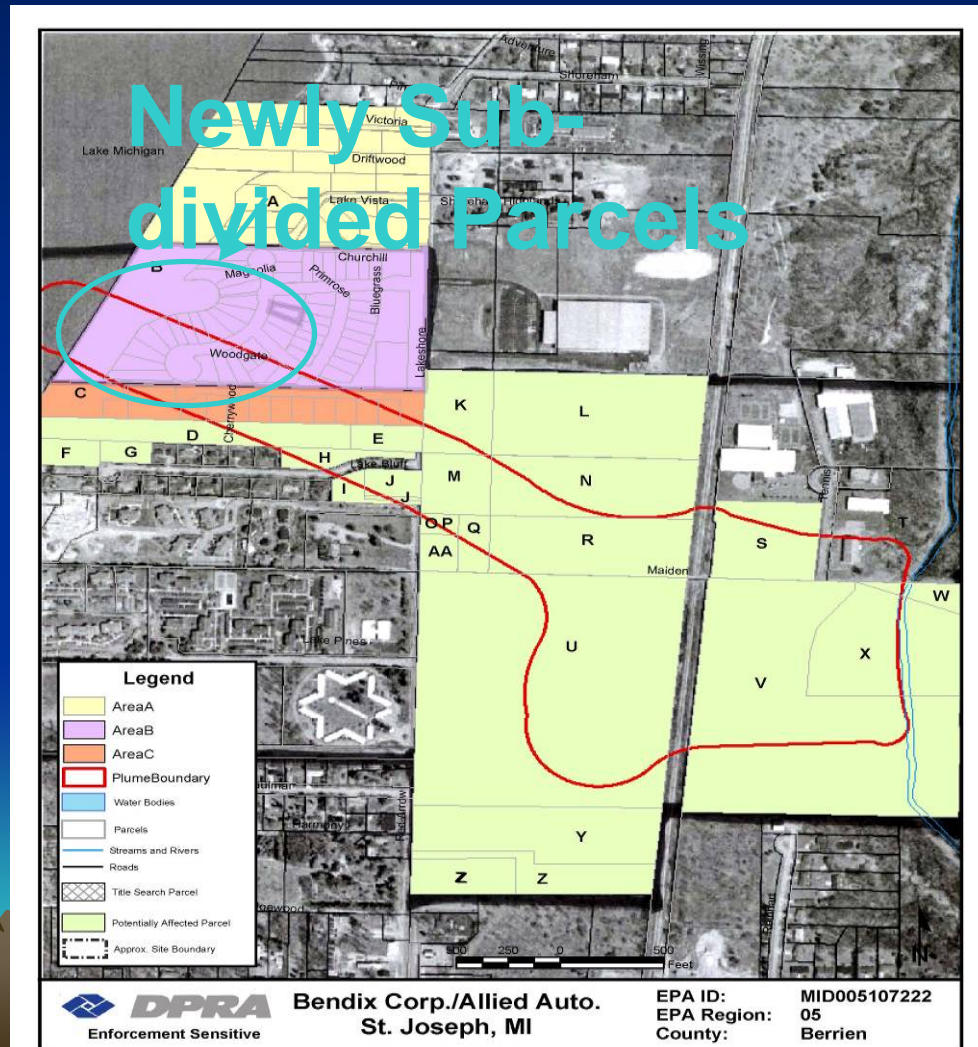


- EXAMPLE  
GROUNDWATER  
PLUME ISSUES





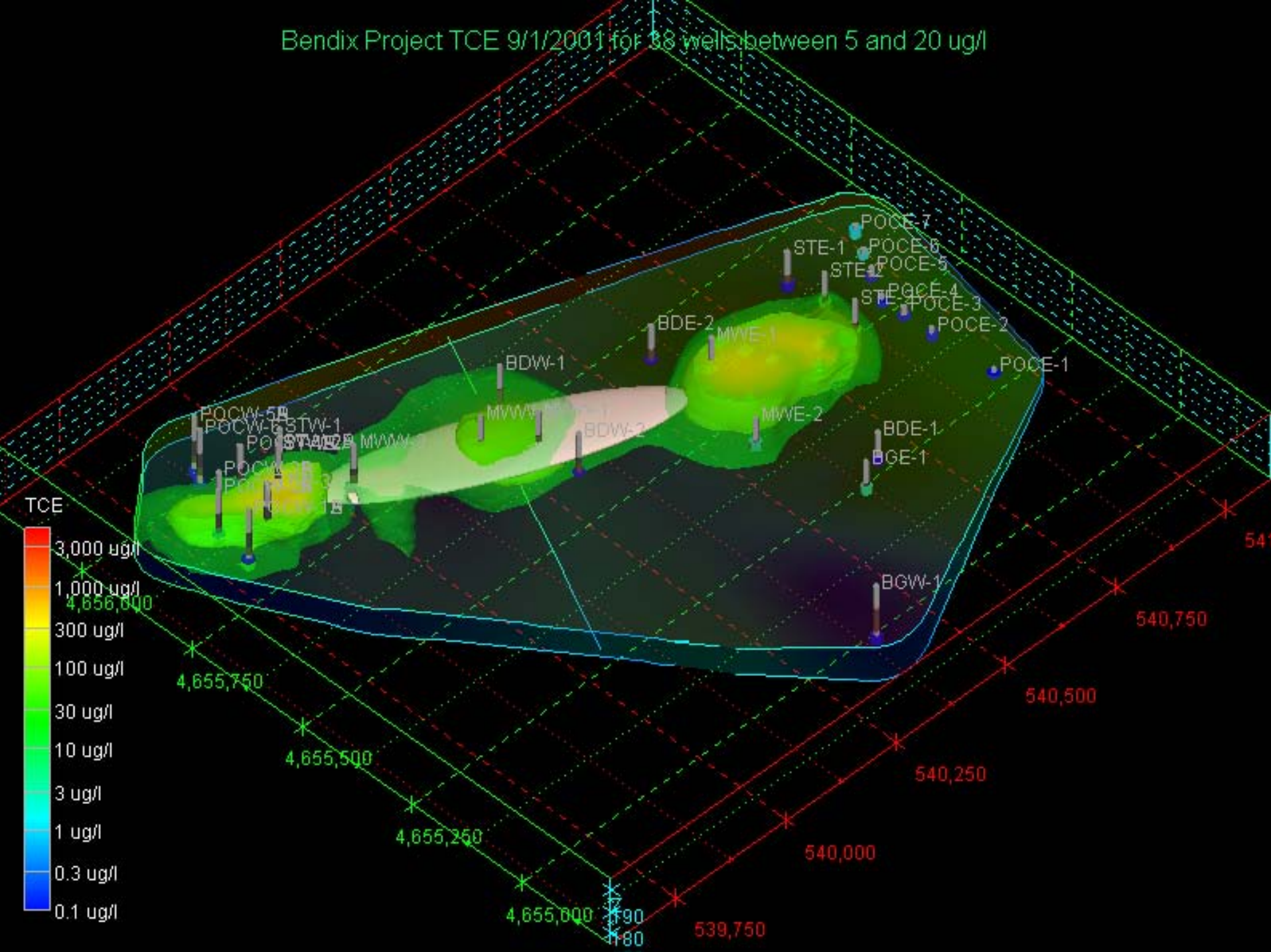
# “Off-Site” Groundwater May Contaminate Numerous Parcels



Plot Prepared by Andrea Porter, US EPA Region 9, 2/20/06



Bendix Project TCE 9/1/2001 for 38 wells between 5 and 20 ug/l



# IN CONCLUSION

- Non-source contamination provides unique challenges for ICs
  - or IC identification,
  - implementation,
  - monitoring and
  - enforcement

